Testimony of the American National Standards Institute

U.S. House of Representatives Science Committee
Subcommittee on Environment, Technology and Standards

Europe, China and the Use of Technical Standards as Trade Barriers: How Should the U.S. Respond?

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Statement of

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Introduction

"If you control an industry's standards, you control that industry lock, stock, and ledger." That prophetic statement was made more than ten years ago by Dr. W. Edwards Deming, father of the quality movement that has transformed the ways companies do business both here and abroad.

Today, standardization[1] has become the key to market access. When standards and conformity assessment related policies and practices differ from country to country, or when standards are used as barriers to trade, businesses are unable to compete effectively in the global marketplace. These challenges are being faced around the globe – country by country – on a daily basis.

The United States Department of Commerce reports that many businesses now view standardization and regulatory issues as their major impediment to increasing exports. Of particular concern are the standards-related activities of the People's Republic of China (hereinafter referred to as either "PRC" or "China") and the member nations of the European Union (EU), each of which have significant ramifications for American firms that wish to export to those markets or who wish to source manufacturing there.

As administrator and coordinator of the United States' private sector-led and public sector-supported voluntary consensus standardization system, the American National Standards Institute (ANSI) shares the concerns of industry and this Committee vis-à-vis our nation's ability to compete effectively in world economies. A key element of ANSI's mission is focused on enhancing the global competitiveness of U.S. business by facilitating voluntary consensus standards (VCS) and conformity assessment systems, and safeguarding their integrity.

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[1] "Standardization" encompasses a broad range of considerations such as which (whose) standards will be used, laboratory accreditation, certification of products, services, and personnel, metrology and measurement, testing and sampling.

In this testimony, ANSI will explain many of its relevant standardization activities related to China and the EU and will recommend actions that can be taken by Congress to assist in mitigating many of the concerns identified. ANSI will also call for Congressional endorsement of the *United States Standards Strategy*[2] (USSS) as a framework that effectively addresses the cross-border trade of goods and services; key national priorities such as homeland security; emerging technologies – such as nanotechnology – and their significant related commercial and business applications; consumer health and safety, and more.

Mr. Joe Bhatia, who is appearing here today on behalf of Underwriters Laboratories, chairs the USSS project. Robert Noth, Donald Deutsch, and Dr. Hratch Semerjian and his staff at the National Institute of Standards and Technology (NIST) all provided invaluable input and leadership throughout the development process of the Strategy. All of us will be pleased to respond to your questions about it.

In addition, ANSI will call for strengthened Federal support of, and cooperation with, the private sector for activities such as research, education, and technical support, and resources to assure adequate U.S. representation at international standards meetings. These actions will help to level the playing field for U.S. businesses competing in the international marketplace.

[2] The *United States Standards Strategy* (draft second edition) is an update of the *National Standards Strategy for the United States* (first edition – August 2000). It is being developed by representatives of various industry sectors, including small, medium and large organizations, consortia, professional societies, trade associations, labor unions, consumer and consumer representative organizations, educational institutions, federal and state government regulators, and legislators and staff.

Considerations with Respect to the People's Republic of China (PRC)

Events of the past few years indicate that stakeholders within the PRC may have been considering a strategy of using national standards as trade barriers to shelter the nation's growing industries. However, the role of the PRC as the world's largest contract manufacturer makes it critical that China be persuaded to continue its participation in international standards forums, rather than develop unique national standards. This is especially important in those instances where the intellectual property rights that are often incorporated into standards are not made available on the basis of reasonable and non-discriminatory terms.

During 2004, the PRC government completed its own investigation of its standards system, identifying problems and suggesting solutions. The issuance of these strategy reports and the seemingly positive content identifying internal changes to be made to the PRC standardization system has been applauded by ANSI.

ANSI has offered its support in reforming the PRC standards system and will encourage support of a process that is driven by marketplace demand where standards are developed in response to specific concerns and needs expressed by industry, government, and consumers (see Annex B).

To assist in the mitigation of concerns about the Chinese standardization policy, ANSI offers the following policy considerations for review and deliberation by the Science Committee of the United States House of Representatives and for consideration by stakeholders in the PRC:

- The global economy will be best served if the PRC joins with the United States and other nations in embracing the globally-accepted principles of standardization endorsed by the WTO (see Annex C). In particular, support should be given to open and inclusive participation in standardization activities; balancing the interests of all stakeholder groups so that the outcomes are representative and broadly supported; and maximizing the participation of, and value to, both intellectual property rights (IPR) holders and implementers.

- Voluntary consensus standards enable industry growth, promote vendor differentiation and allow for adaptation to meet unique consumer and stakeholder needs. To the extent that the PRC adopts existing and globally recognized voluntary standards – rather than developing unique standards for use only in China – the nation and its growing export market will benefit.

- The inclusion of intellectual property, under reasonable and non-discriminatory (RAND) terms and conditions, in voluntary consensus standards provides benefit to the contributor of that intellectual property via licenses and/or recognition and to implementers of the standard via the reduced need to support multiple specifications. Companies in China are encouraged to consider offering intellectual property for inclusion in globally recognized standards.

- The global landscape is rich with entities, systems and processes that support regional and international standardization activities. These include treaty organizations where governments are members; non-treaty organizations whose membership is comprised of national representatives; professional and technical organizations whose membership is on an individual or organizational basis; and through consortia whose membership is typically company and industry based.

  – The PRC will benefit by broadening its definition of "international standard" to include documents that have been either developed or ratified by any consensus-based organization pursuant to transparent policies that are reasonable and non-discriminatory. China's current definition is limiting in that it applies only to standards that have been approved by the International Organization for Standardization (ISO), International

Electrotechnical Commission (IEC), and the International Telecommunication Union (ITU).

- As a means of fostering both competition and innovation, governments in all nations should allow stakeholders, particularly companies, to choose among the different voluntary standards that may be applicable.

Considerations with Respect to the European Union and the European Standards Organizations

Similar to the United States, the European Union and its member nations have increased their reliance on standards developed under a voluntary consensus process. Unfortunately, the similarities often end here.

In the U.S., a standard is generally developed in response to market demand or need. Standards in Europe are often developed to fill a government need for a specific set of regulatory requirements or procurement policies of government agencies. A standard that is adopted by the EU must become the normative document for each of the EU member nations. With few exceptions, the three European Standards Organizations – the European Committee on Standardization (CEN), the European Committee on Electrotechnical Standardization (CENELEC), and the European Telecommunications Standards Institute (ETSI) – restrict participation on their standards-setting committees to entities that have a physical presence in one of the EU member nations.

To assist in the mitigation of concerns about the EU standardization policy, ANSI offers the following policy considerations for review and deliberation by the Science Committee of the United States House of Representatives and for consideration by stakeholders in Europe:

- Some access to the ESOs is available via the role of ANSI and its U.S. National Committee of the International Electrotechnical Commission (USNC/IEC) as the U.S. member of the ISO and IEC, respectively. An ANSI delegation engages regularly with representatives of the European Commission and the ESOs to raise strategic standards issues from the U.S. perspective. ANSI will continue to pursue an expansion of the ESO's participation requirements to provide for the ability of U.S. stakeholders to influence the development of EU standards that will ultimately impact their ability to trade with the European market.

- At the same time that the EU and its member nations have become more aggressive in producing standards that serve EU producers, they have also begun expending millions of Euros annually to provide technical assistance to developing and emerging nations, including China. These efforts often include providing free standards, and even translations of standards, in return for commitments by the recipient nations to adopt or otherwise use the EU standards. While some U.S. standards developers and companies have aggressively promoted their catalogues of standards to emerging nations, to date neither U.S. industry nor government has been willing or able to make contributions that will offset this imbalance.

    - The U.S. standardization community does not have the resources to match the large investment being made by the Europeans. Federal government support of, and cooperation with, the private sector is needed for activities such as research, education, and technical support, and resources to assure adequate U.S. representation at international standards meetings.

- These U.S. outreach and promotion efforts must be well coordinated. ANSI offers its Regional Standing Committee for Europe, the Middle East and Africa (RSC-EMEA)[3] as a focal point to improve coordination between private sector interests, and governmental interests in the areas of trade and regulatory policy, which involve different government agencies and participants.

Coordinating Public and Private Sector Strategies.

The above policy considerations for China and Europe are aligned with high-level strategies developed by the U.S. Department of Commerce following the issuance in May 2004 of "*Standards and Competitiveness – Coordinating for Results,*" a report acknowledging the growing awareness of standards as a key trade issue. These considerations are also aligned with the latest edition of the draft *United States Standards Strategy* (USSS) (www.ansi.org/usss). A key aspect of the *Strategy* is reference to the requirements of the WTO's Technical Barriers to Trade as related to standards practices.

As referenced in the Introduction of this testimony, the USSS is a guidance document that is being developed by members of the U.S. standardization community, including representatives of industry[4], government, consumers, academia and more. It is a perfect example of the U.S. public-private sector partnership approach to standardization.

- The *U.S. Standards Strategy* is expected to be finalized in late 2005. Implementation of its strategic initiatives and tactics will be strengthened by Congressional recognition and endorsement. This endorsement will also provide valuable support to the private sector as it engages with Europe and the various standards organizations in China.

  - ANSI encourages the Science Committee to offer a resolution or other legislative vehicle to enable the Congress to formally endorse the *U.S. Standards Strategy*.

[3] ANSI established the RSC-EMEA to broaden the participation of U.S. stakeholders in the development of policy positions regarding regional standards and conformity assessment activities, and to coordinate U.S. activities, respond to initiatives and advise ANSI on matters relating to the European, Middle Eastern and African regions.

[4] Representatives of the National Association of Manufacturers (NAM) have been actively involved in the process of updating the *U.S. Standards Strategy*; William Primosch, NAM's senior director of international business policy, headed the working group drafting the international section of the Strategy.

Summary

The American National Standards Institute is proceeding with its plans to assist in reforming the PRC standards system, working with Europe in establishing a level playing field for U.S. stakeholders, and finalizing and implementing the *United States Standards Strategy*.

On behalf of its members, constituents, and the U.S. standardization community, the Institute will continue to serve as an advocate for an open, balanced and transparent global standards system that is driven by marketplace demand. ANSI will also encourage China, the EU and its members, and all other nations to pursue the development, endorsement and adoption of globally recognized standards that respond to specific concerns and that meet the needs expressed by all stakeholders.

ANSI welcomes the opportunity to continue to work in partnership with this committee, Congress, and other U.S. public sector representatives to achieve these goals.

Annex A

Background on the U.S. Standardization System and the Role of the American National Standards Institute (ANSI)

The U.S. private sector-led, voluntary standardization system has been in existence for more than 100 years. It is a highly decentralized system and naturally partitioned into industrial sectors that are supported by numerous independent, private sector standards developing organizations (SDOs). It is a system that is demand-driven by the marketplace with standards typically developed in response to specific concerns and needs expressed by industry, government, and consumers.

Since 1918, this system has been administered and coordinated by the American National Standards Institute (ANSI) with the cooperation of the private sector and the Federal, state and local governments. ANSI does not develop standards. Rather, it functions as a central clearinghouse and coordinating body for its member organizations. The Institute is a unique partnership of industry, professional, technical, trade, labor, academic and consumer organizations, as well as government agencies. These members of the ANSI federation actually develop standards or otherwise participate in their development, contributing their time and expertise in order to make the system work.

ANSI ensures the integrity of the U.S. standards system by:

1. establishing a set of due process-based "essential requirements" that SDOs may follow in order to manage the consensus standards development process in a fair and open manner,
2. accrediting SDOs who adhere to these requirements,
3. approving candidate standards from ANSI-accredited SDOs as American National Standards (ANS), and
4. conducting regular audits of the ANS activities of ANSI-accredited SDOs to ensure ongoing compliance with ANSI's essential requirements.

ANSI has accredited hundreds of SDOs across a range of industry sectors. These industries include (but certainly are not limited to) telecommunications, medical devices, heavy equipment, fire protection, information technology, petroleum, banking and household appliances. There are now approximately 10,000 ANSI-approved ANS that address topics as diverse as dimensions, ratings, terminology and symbols, test methods, interoperability criteria, product specifications, and performance and safety requirements. These standards development efforts serve the public interest and are being applied to new critical areas such as the environment, healthcare, homeland security and nanotechnology.

The Institute's approval of a candidate standard as an ANS verifies that the principles of openness and due process have been followed and that a consensus of all interested parties has been reached. Due process requires that all proposed ANS be circulated to the public at large for comment, that an attempt be made to resolve all comments, and that there is a right of appeal. In addition, ANSI considers any evidence that a proposed ANS is contrary to the public interest, contains unfair provisions or is unsuitable for national use. This basic formula has been the hallmark of the ANS process for decades, and it has garnered worldwide respect and acceptance.

One of the best indicators of confidence in the U.S. voluntary consensus standardization system (as exemplified by the ANS process) is Congress's 1996 passage of the National Technology Transfer and Advancement Act (NTTAA). This law (P.L. 104-113) requires Federal agencies to use voluntary consensus standards for regulatory purposes wherever feasible and to procure equipment and services in accordance with such standards. It also requires agencies to increase

their participation in voluntary consensus standards activities and directs the Commerce Department's National Institute of Standards and Technology (NIST) to coordinate Federal, state and local voluntary standards and related conformity assessment activities.

ANSI also promotes the use of U.S. standards internationally. The Institute serves as the U.S. national body representative in two major, non-treaty international standards organizations: the International Organization for Standardization (ISO) and, through the United States National Committee (USNC), the International Electrotechnical Commission (IEC). ANSI and the USNC play a leadership role in ISO and IEC, respectively, on both policy and technical matters.

Part of ANSI's role as the U.S. member of ISO includes accrediting U.S. Technical Advisory Groups (U.S. TAGs) which develop and transmit, via ANSI, U.S. consensus positions on the activities and ballots of technical committees and subcommittees. Similarly, the USNC approves TAGs for IEC activities. In many instances, voluntary standards developed by U.S. SDOs are taken forward, through ANSI or the USNC, where they are approved in whole or in part by the ISO and/or IEC as International Standards. ANSI also encourages the adoption of international standards as national standards where they meet the needs of the user community.

In addition, ANSI advocates U.S. positions in various regional standards organizations and regularly meets with representatives from standards bodies in other nations. Thus, ANSI plays an important role in facilitating the development of global standards that support global commerce and which prevent regions from using local standards that favor local industries as trade barriers.

Conformity assessment is the term used to describe steps taken by both manufacturers and independent third-parties to determine fulfillment of standards requirements. ANSI's role in the conformity assessment arena includes accreditation of organizations that certify that products and personnel meet recognized standards. The ANSI-American Society for Quality National Accreditation Board (ANAB) serves as the U.S. accreditation body for management systems certification, primarily in areas such as quality (ISO 9000 family of standards) and/or the environment (ISO 14000 family of standards). ANSI also is involved in several international and regional organizations to promote multilateral recognition of conformity assessments across borders to preclude redundant and costly barriers to trade.

In summary, through its various roles and responsibilities, ANSI advances its mission to "enhance both the global competitiveness of U.S. business and the U.S. quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems and safeguarding their integrity."

Annex B

Background on Standards and Trade with China

As the U.S. member body of ISO, and via the U.S. National Committee of IEC, ANSI serves as the national standards body counterpart to the PRC and can help influence Chinese stakeholders to participate in the fair and open standardization process that has as its goal the development of a single set of globally recognized and accepted standards.

As noted earlier in this testimony, recent events indicate that the PRC may have been considering using standards to establish trade barriers as a strategy to shelter the nation's growing industries. One well-publicized example is related to the PRC's domestic high-technology industry and the issue of a Wireless Local Area Network (WLAN) Authentication and Privacy Infrastructure (WAPI) and Wireless Fidelity (Wi-Fi) chips, the devices that allow computers to access the Internet through local wireless networks.

On May 12, 2003, the PRC government mandated that a new WLAN WAPI security standard take effect in June 2004. The new standard was developed independently by the PRC Broadband Wireless IP Standard (BWIPS) Group with little or no communication with other standards organizations and no foreign participation. Upon implementation of the PRC government directive, foreign importers to China would have been mandated to comply with a requirement to form joint ventures with one of 24 PRC companies that had been given proprietary technical information required for implementation of the WAPI standard.

The U.S. Government and industry pointed out that there is already an internationally accepted standard for such technology (IEEE 802.11). On March 2, 2004, in a joint letter signed by U.S. Secretary of State Colin Powell, U.S. Commerce Secretary Don Evans and U.S. Trade Representative Robert Zoellick to Zeng Peiyan, Vice Premier of the People's Republic of China, the Bush administration urged PRC to drop WAPI. Following high-level meetings in Washington, D.C., the PRC government announced that it would (a) suspend implementation of the WAPI standard, (b) work to revise the WAPI standard, taking into account comments received from PRC and foreign firms, and (c) participate in international standards bodies on WAPI and wireless encryption for computer networks.

In recent months, ANSI has worked through international forums, its membership, and in concert with the China desk at the Department of Commerce's International Trade Administration to invite representatives of the PRC standards organizations to a meeting to discuss a long-term resolution of the WAPI issue, including fair consideration of the PRC proposal in the appropriate international forum. ANSI believes that respectful and open engagement with the various PRC standards groups is the best way to resolve such issues going forward.

While WAPI is important for many reasons, the PRC is also developing several other important (but locally divergent) standards in areas as diverse as the Internet Protocol, 3G wireless communications (such as TD SCDMA[5] and SCDMA[6]), audio-video capture and playback (AVS), document and data protection, the small intelligent grouping and resource sharing (IGRS) for terminal device collaboration radio devices being developed for inventory management (RFID), and others. It is the pervasive nature of these activities, and the related treatment of intellectual property, that is of significant concern to PRC's trading partners.

[5] Time Division Synchronous Code Division Multiple Access (TD-SCDMA) is a mobile telephone standard for wireless network operators who want to move from a second generation (2G) wireless network to a third-generation (3G) one.
[6] Synchronous Code Division Multiple Access

Subsequent to the initial WAPI controversy, the PRC government issued a report identifying concerns in the PRC standards system and suggesting solutions. The study was a cooperative effort between the Chinese Ministry of Science and Technology (MoST), the Chinese General Administration for Quality Supervision, Inspection and Quarantine (AQSIQ), and the Standardization Administration of China (SAC). The report itself was drafted by the China National Institute of Standardization (CNIS), an agency within the AQSIQ, which met with an ANSI delegation in Washington, D.C. in December 2003.

The report suggested:

- changing the existing four levels of: National, Vertical, Local, and Enterprise standards to the three levels of: National, Association, and Enterprise standards;

- changing the two categories of standards: Mandatory and Recommended standards into only voluntary standards; voluntary standards becoming mandatory only via references or citations in government regulations;

- changing the standards development accreditation scheme: Currently, national, vertical and local standards are subject to government approval. The suggestion is to change this system so that: governmentally accredited bodies will approve national standards and associations will approve association standards;

- that enterprises should be free to determine their own standards usage without the governmental registration required today;

- that standards should be adopted voluntarily by the users of standards.

The issuance of the SAC strategy reports, and the seemingly positive content identifying internal changes to be made to the PRC standardization system, prompted ANSI to send a letter to the Administrator of SAC, Li Zhonghai, in October 2004. This letter congratulated SAC on the undertaking of this study and applauded the recommendations put forward in the report.

To further its outreach efforts, in mid-January 2005 ANSI's president and chief executive officer Dr. Mark. W. Hurwitz, traveled to China to meet with Administrator Li and representatives of CNIS, the Administration of Certification and Accreditation of China (CNCA), the Standards Press of China (SPC) and the U.S. Foreign Commercial Service in Beijing. During these discussions, ANSI agreed to serve as the distributor of Chinese national standards in the U.S. and SAC agreed to become a distributor of American National Standards, as well as certain other standards developed by U.S.-based standards-setting bodies, in China. This arrangement will facilitate access to the national standards of each nation and is seen as crucial to the promotion of cross-border trade.

ANSI has also taken steps to mitigate the difficulty of obtaining entry visas for Chinese technical experts who are attempting to attend meetings of international standards committees in the United States. Among the actions taken was publication of a guidelines document that provides information for Chinese technical experts and for the administrators and officers of the technical committee meetings that are hosting those meetings; ANSI is engaged in ongoing discussions of this topic with the U.S. Department of State and other relevant agencies.

Dr. Hurwitz also explored with SAC the prospect of increasing U.S. and other foreign access to participation on standards-setting committees in the PRC. Current and proposed future options were discussed, with a strong indication being given to ANSI by SAC that China will be moving

away from its past practices of favoring government-held seats on its national standardization committees and placing restrictions and/or limits on open participation on these committees.

Finally, during his visit Dr. Hurwitz was introduced to a new initiative within PRC to develop a Chinese Standards Strategy. The Strategy's goals include efforts to develop, within 15 years, "independently self-proprietary technical standards through effective measures, so as to improve international competitiveness of China's technical standards and therefore increase the international market share of Chinese products."

Its Guiding Principles bear in mind the goals of "new-stage industrialization and comfortably-off society," focus on improvement of technical standard adaptability and competitiveness, couple standard independence/innovation with international norms, integrate governmental instruction and market orientation with enterprise as the major player, and meet the strategic requirements of technological innovation as well as industrial and trade development on technical standards.

In the near term, Chinese strategic goals to be achieved by 2010 include the formation of a rather complete national technical standard system, putting the overall technological level of Chinese standards on a par with that of international standards for key areas. By 2020, the PRC intends to upgrade its international standards involvement to an advanced level, putting China high on the rank of international standardization contributors.

Annex C

Excerpt from the [draft] United States Standards Strategy

PRINCIPLES

It is well established in the community of nations that standards should meet societal and market needs and should not be developed to act as barriers to trade. In approving the World Trade Organization Technical Barriers to Trade Agreement, WTO members recognized that goal and established globally accepted principles as a framework to promote cooperation and discourage the use of standards as trade barriers. The U.S. standards system **is based on** the following set of globally accepted principles for standards development.

- ***Transparency***
  Essential information regarding standardization activities is accessible to all interested parties.
- ***Openness***
  Participation is open to all affected interests.
- ***Impartiality***
  No one interest dominates the process or is favored over another.
- ***Effectiveness and relevance***
  Standards are relevant and effectively respond to regulatory and market needs, as well as scientific and technological developments.
- ***Consensus***
  Decisions are reached through consensus among those affected.
- ***Performance-based***
  Standards are performance-based, specifying essential characteristics rather than detailed designs where possible.
- ***Coherence***
  The process encourages coherence to avoid overlapping and conflicting standards.
- ***Due Process***
  Standards development accords with due process so that all views are considered and appeals are possible.
- ***Technical Assistance***
  Assistance is offered to developing countries in the formulation and application of standards.

In addition, U.S. interests strongly agree that the process should be

- ***Flexible***, allowing the use of different methodologies to meet the needs of different technology and product sectors;
- ***Timely***, so that purely administrative matters do not slow down the work, but meet market expectations; and
- ***Balanced*** among competing interests.